

Middlesex University Research Repository

An open access repository of
Middlesex University research

<http://eprints.mdx.ac.uk>

Drennan, Vari, Collins, Linda, Allan, Helen T. ORCID logoORCID:
<https://orcid.org/0000-0001-9391-0385>, Brimblecombe, Neil, Halter, Mary and Taylor,
Francesca (2022) Are advanced clinical practice roles in England's National Health Service a
remedy for workforce problems? A qualitative study of senior staff perspectives. Journal of
Health Services Research and Policy, 27 (2) . pp. 96-105. ISSN 1355-8196 [Article]
(doi:10.1177/13558196211036727)

Final accepted version (with author's formatting)

This version is available at: <https://eprints.mdx.ac.uk/34008/>

Copyright:

Middlesex University Research Repository makes the University's research available electronically.

Copyright and moral rights to this work are retained by the author and/or other copyright owners unless otherwise stated. The work is supplied on the understanding that any use for commercial gain is strictly forbidden. A copy may be downloaded for personal, non-commercial, research or study without prior permission and without charge.

Works, including theses and research projects, may not be reproduced in any format or medium, or extensive quotations taken from them, or their content changed in any way, without first obtaining permission in writing from the copyright holder(s). They may not be sold or exploited commercially in any format or medium without the prior written permission of the copyright holder(s).

Full bibliographic details must be given when referring to, or quoting from full items including the author's name, the title of the work, publication details where relevant (place, publisher, date), pagination, and for theses or dissertations the awarding institution, the degree type awarded, and the date of the award.

If you believe that any material held in the repository infringes copyright law, please contact the Repository Team at Middlesex University via the following email address:

eprints@mdx.ac.uk

The item will be removed from the repository while any claim is being investigated.

See also repository copyright: re-use policy: <http://eprints.mdx.ac.uk/policies.html#copy>

Authors final submitted Manuscript .

Published Drennan VM, Collins L, Allan H, Brimblecombe N, Halter M, Taylor F. Are advanced clinical practice roles in England's National Health Service a remedy for workforce problems? A qualitative study of senior staff perspectives. Journal of Health Services Research & Policy. August 2021. doi:10.1177/13558196211036727

Advanced clinical practice roles in the National Health Service, England: a remedy for workforce problems? A qualitative study of senior staff perspectives.

Authors

Vari M Drennan*, Professor, Centre for Health & Social Care Research, Joint Faculty of Kingston University and St George's University of London, London, UK orcid.org/0000-0002-8915-5185

Linda Collins, Associate Professor, School of Nursing, Joint Faculty of Kingston and St George's University of London, London, UK

Helen Allan , Professor , School of Health & Education, Middlesex University , London , UK

Neil Brimblecombe, Professor, School of Health & Social Care , London South Bank University, London, UK

Mary Halter, Associate Professor, Centre for Health & Social Care Research, Joint Faculty of Kingston University and St George's University of London, London, UK. Orcid 0000-0001-6636-0621

Francesca Taylor, Research Associate, Centre for Health & Social Care Research, Joint Faculty of Kingston University and St George's University of London, London, UK
orcid.org/0000-0003-3751-6003

*Corresponding author: VM Drennan, v.drennan@sgul.kingston.ac.uk ,+44 (0) 2087252339

Twitter

@varidrennan

@MH_maryhalter

Ethics Approval

The study received approval from the Kingston University Research Ethics Committee (FREC2019-05-007)

Acknowledgments

This paper represents research was independently commissioned by Health Education England (HEE), London, a Non-Departmental Public Body and part of the National Health Service (NHS). The views expressed in the paper are those of the authors and do not necessarily reflect those of HEE, the NHS or the Department of Health, England.

Conflicts of Interest

None Declared

Abstract

Objective: A major issue facing all health systems is improving population health while at the same time responding to both growing patient numbers and needs and developing and retaining the health care workforce. One policy response to workforce shortages has been the development of advanced clinical practice roles. In the context of an English national policy promoting such roles in the health service, we explored senior managers' and senior clinicians' perceptions of factors at the organization level that support or inhibit the introduction of advanced clinical practice roles. The investigation was framed by theories of the diffusion of innovation and the system of professions.

Methods: We conducted a qualitative interview study of 39 senior manager and clinicians in 19 National Health Service acute, community, mental health and ambulance organizations across a metropolitan area in 2019.

Results: Small numbers of advanced clinical practice roles were reported, often in single services. Four main influences were identified in the development of advanced clinical practice roles: staff shortages (particularly of doctors in training grades) combined with rising patient demand, the desire to retain individual experienced staff, external commissioners or purchasers of services looking to shape services in line with national policy, and commissioner-funded new roles in new ambulatory care services and primary care. Three factors were reported as enabling the roles: finance for substantive posts, evidence of value of the posts, and structural support within the organization. Three factors were perceived as inhibiting developing the roles: confusion and lack of knowledge amongst clinicians and managers, the availability of finance for the roles, and a nervousness (sometimes resistance) to introducing the new roles.

Conclusions: While the national policy was to promote advanced clinical practice roles, the evidence suggested there was and would continue to be limited implementation at the operational level. Development scenarios that introduced new monies for such roles reduced some of the inhibiting factors. However, where the introduction of roles required funding to move from one part of a service to another, and potentially from one staff group to another, the growth of these roles was and is likely to be contested. In such scenarios, research and business evidence of relative advantage will be important, as too will be supporters in powerful positions. The paucity of publicly available evidence on the effectiveness of advanced clinical practice roles across the specialties and professions in the context requires urgent attention.

Keywords

advanced clinical practice, National Health Service, innovation

Introduction

All health care systems are facing the quadruple challenge: how to improve the experience of care, improve population health, reduce per capita cost of health care, and improve the lives of health care staff.¹ At the same time there is global maldistribution and shortages of doctors and other health professional groups.² One solution advocated by the World Health Organization is to develop mid-level providers who, although not doctors, are educated to a level to be able to undertake some of the activities of doctors within a prescribed scope of practice.² These mid-level providers originate from two distinct pathways. The first group are those who are directly recruited with further or higher education qualifications to non-physician clinician (NPC) training courses, such as physician assistants/associates, clinical officers, and assistant medical officers. The second group are those with an existing health profession qualification and licence who train as an advanced clinical practitioner (ACP) - for example, nurse practitioners and extended practice physiotherapists. This second group will be the focus of the current study.

Our scoping review (2000 to October 2020) of the extent and spread of these roles found variability between and within countries and regions. A national key informant survey of 47 sub-Saharan countries reported 25 with some NPCs (commonly known as clinical or health officers).³ Repeated national key informant surveys tracked the growth in the number of countries with advanced nurse practitioner roles from 14 in 2008 to 38 in 2011.^{4,5} A third of the Organisation for Economic Co-operation and Development member countries reported introducing advanced clinical practice roles for nurses, pharmacists and other professions, primarily to address access to primary care services.⁶ With regard to the quality assurance of ACP and NPC education and titles, reviews reported inter- and intra-country variations in education levels, scope of practice, and presence of legislation.^{7,8,9,10} Consequently, the nature

of advanced clinical practice is country- and occupational group-specific. For example, a minority of countries legislate for nurses to prescribe medications, but in some of these countries the legislation allows all registered nurses to prescribe certain categories of medicines, while in others registered nurses require additional qualifications and licensure.¹¹ Many reviews report that the presence and spread of NPCs and ACPs are influenced by health workforce policies, but that these in turn are dependent on the extent of opposition or support of other professional groups, most notably medical.^{3,4,5,6,7,8,9,10,12}

England is one high-income country with explicit policies for increased numbers of ACP roles within its tax-funded National Health Service (NHS) to address, amongst other issues, the shortages and maldistribution of doctors.^{19,20} The policies have been in place since 2014 and support ACP roles from across professional backgrounds: nurses, midwives, allied health professionals, pharmacists and health scientists. These policies have been underpinned by national workforce development strategies that have committed substantial financial resources to advanced clinical practice education.²¹ While the United Kingdom (UK) has devolved health policy to its constituent countries (England, Wales, Scotland and Northern Ireland), the governance of health professionals remains across all four countries. There is no state regulation or licensing for ACP roles. Health Education England (HEE) - the government body responsible for health workforce planning, development and commissioning (i.e. purchasing some education and training for NHS staff from education providers, such as universities) in England - has published a multi-professional ACP framework.²² This framework specifies the ACP level of practice for those health professionals already regulated by the Nursing & Midwifery Council or the Health & Care Professions Council. HEE's defines Advanced Clinical Practice as follows:

Advanced clinical practice is delivered by experienced, registered health and care practitioners. It is a level of practice characterised by a high degree of autonomy and complex decision making. This is underpinned by a master's level award or equivalent that encompasses the four pillars of clinical practice, leadership and management, education and research, with demonstration of core capabilities and area specific clinical competence.^{14(p8)}

HEE has established a national centre for the accreditation of ACP master's level courses.²²

There are no figures as to the numbers or extent of ACP posts in the UK. There is some evidence in a few types of services that the numbers are small but growing, with significant regional variation. For example, in 2019 there were 164 critical care units employing 16,480 registered nurses of whom 153 were Advanced Critical Care Practitioners, an increase of 60 since 2017, but none were reported in 4 of 18 areas in England and Wales.²³

There are many international reports and reviews of the introduction of advanced clinical practice roles at the team level (the micro level), mainly focusing on nurses.^{13,14}

Organization-level (the meso level) consideration of the influences on the introduction of advanced roles has mainly focused on primary care medical services (also known as family physician or general practice services).¹⁵ Where studies have included consideration of the hospital and community health services organization level perspective, the reporting of findings has not distinguished the meso from the micro level.^{16,17,18} In this study we investigate the factors influencing the development and continuance, or otherwise, of ACP posts at the meso level of the health system, in English NHS organizations, in the context of significant macro level policy support for the workforce innovation of advanced clinical practice roles.

The study addresses two research questions in the English NHS context:

1. To what extent are NHS acute, community and emergency services described to be developing ACP roles and what are the stimuli driving their development or otherwise?
2. What do senior managers in NHS organizations consider to be the factors influencing the success or otherwise of the introduction and continuance of ACP roles in the workforce?

As the focus of the study was a workforce innovation, and an innovation that international reviews identified was influenced by the views of other professional groups, it was framed by two sets of theories. The first was Greenhalgh et al.'s theory of the diffusion of innovation, in which there is a complex interplay between the outer context, the resource system, the knowledge purveyors, change agency and the inner processes of the user system.²⁴ The second was Abbott's theory of the system of professions, characterized as a jostling, interdependent ecology in which the activities and developments of one occupational group impact on others and are tied up with issues of power, status and rewards.²⁵ Within the field of health care, Abbott identified medicine as the dominant profession. Abbott argued that professions contested for jurisdiction over work, theoretical knowledge and client groups but jurisdiction was also shaped by societal changes and state agency. Abbott described jurisdiction boundary contests between groups as resulting in a range of possible settlements including the legal right of a single group to perform certain tasks and the subordination of one group to another. Abbott also noted that dominant professions released jurisdiction to others of work or clients considered routine or of lower status.²⁵ The jurisdiction issues described by Abbott are symbolic of the complex interactions described by Greenhalgh et al.^{24,25}

Methods

The qualitative study design was in the interpretative tradition underpinned by the pragmatist paradigm, which recognizes multiple perceptions occurring within specific socio-cultural and historical contexts but is focused on problems and solutions.²⁶ Individual semi-structured interviews and one group interview were used to gather data in 2019 from a purposive sample of senior (including board level) managers and clinicians with responsibilities for service provision and workforce issues in 19 NHS organizations in a large metropolitan area (population eight million). The NHS organizations (known as trusts) provided mental health services, community services, acute hospital services, tertiary care, or emergency care and ambulance services or a combination thereof, but not primary care general practice services (known in other countries as family physician services). The organizations employed between 1,000 to over 12,000 staff.

Potential participants were initially approached by email using publicly available information on the organizations' websites. The email invitation to participate included information about the study, researcher contact details and a request to pass the invitation to other relevant senior staff in the organization. Recruitment continued until the sampling frame was filled across the breadth participant and organization type. Interviews were undertaken by all study researchers (authors) and were conducted by telephone, video call or face-to-face, as preferred by participants. The study researchers developed the topic guides for the interviews based on the research questions and theoretical framing, informed by input from patient and public representative advisers to the study. Questions addressed perceived reasons for the introduction and development of ACP roles, the number and extent of ACP roles, factors influencing (positively and negatively) the introduction and spread of such roles and any local evidence of value or impact of the roles (for more information on the interview questions, see online supplementary file 1). With the participants' consent, the interviews were recorded or contemporaneous notes taken.

The interview data were coded and analysed using thematic analysis, which was informed by the research questions and the theoretical framing. Analysis was conducted through an iterative, comparative process of discussion and written reports between researchers.

The study was conducted in an ethical manner, ensuring informed consent for participation and for the use of anonymized quotations. Research ethics review was undertaken and approved by the relevant university research committees.

Results

The researchers conducted 29 individual interviews with senior managers and clinicians, and one group interview with 10 directors of nursing for mental health services or mental health and community services. This produced a total of 39 interviews, across 19 NHS organizations (Table 1).

[INSERT TABLE 1]

We report first on the extent of ACP positions and situations reported as driving their development, before turning to the factors that interviewees considered enabled or deterred the introduction and continuance of these positions.

The extent of ACP positions

Most NHS organizations were reported to have a small number of ACPs, although some had only trainee ACPs. For example, in one acute care and community service organization employing over 12,000 staff, 80 staff were reported as working at ACP level. Some organizations were reported to not employ any ACPs, mainly those providing mental health services. Only two of the organizations had documented numbers of the ACPs they employed. Where they existed, the ACPs were mainly clustered in certain types of services

such as urgent and emergency care services, musculoskeletal services, critical care and podiatric surgery. The majority of ACPs were reported to be nurses, but physiotherapists, paramedics, and podiatrists were also described as working at advanced levels and to a lesser extent some pharmacists, dietitians, radiographers, speech and language therapists, midwives, clinical psychologists, and health scientists. In some organizations, there was reported to be a long history of over 10 years of developing ACPs in services such as urgent and emergency services and musculoskeletal services. However, what was more commonly described were single ACP posts of more recent origin without necessarily a planned workforce strategy. As one participant reported:

I think what's happened is that [ACP] posts have evolved over time, led by services, or the geography. And I think, in terms of the ACP role, I don't think that has been led specifically across the trust. (ID 021)

The perceived impetus for ACP posts

Participants in organizations with ACPs described four types of stimuli to the development of ACPs posts. Two were internal and two were external to the organization, but interlinked. The first internal stimulus was the organizational response to ongoing and predicted staff shortages particularly of doctors in training grades, combined with rising patient demand for the services. The combination of these two issues was reported as problematic for the quality and cost of services, which drove a directorate or organizational level response:

The whole thinking behind ACPs, of non-medical staff and particularly for us at [name of hospital] - we're extremely challenged trying to find doctors to work within [service]. (ID 011)

The second stimulus internal to organizations was reported to be the desire to retain individual experienced staff through both career development opportunities for the individual, but also through the contribution they could make to the quality of the service delivery:

So, if we don't do clinical career development for [name of professional group] they won't stay with us, so that's the retention agenda. (ID 141)

The ACPs have stayed in the surgical area and seen it as a progression route. (ID 013)

Participants identifying these two internal stimuli were, in the main, providing acute hospital services.

The third stimulus was reported to come from external commissioners or purchasers of services looking to shape new or existing services in line with national policy. The NHS has a system of local bodies, known at the time as Clinical Commissioning Groups (CCGs) who purchase or commission NHS services on behalf of a defined population. The participants pointed to national policy, the NHS Long Term Plan,²⁰ which directed CCGs and NHS organizations to deliver more care outside of hospital settings and increase ambulatory care provision designed to avoid hospital admission. In designing new types of services, in the context of medical workforce shortages, participants described the inclusion of new ACP roles as a means of achieving the desired change:

Some of the key areas of focus [of CCG commissioners] are driving the ACP health roles. For example, there's a real focus on diabetes, there's a real focus on frailty and I think they are helping to shape some of the conversations with regards to needing to work in a slightly different way. (ID 111)

Some participants pointed to the significant stimulus created by the NHS Long Term Plan,²⁰ which financed the salaries of some types of ACPs such as prescribing pharmacists and first contact physiotherapists to work in ambulatory care settings.

So, we're working with local PCNs [primary care networks] for us at [name of organization] to be the provider of independent prescribing pharmacists rather than they employ individuals who become isolated and that way we don't lose skilled people (ID 321)

This third stimulus was reported mainly from participants from those providing community, urgent and emergency care services.

The fourth stimulus was reported as the opportunity for the organization to participate in external national and regional HEE funded programmes of ACP training for already registered health professionals, such as ACP roles in emergency services. This was reported from those participants providing acute care and ambulatory services.

We turn now to the perceived factors supporting and inhibiting ACP posts.

Factors supporting the development, maintenance, and growth of ACP posts

Participants reported three main factors as enabling of ACP posts: finance, evidence of value of ACP posts, and structural support within the organization.

Finance was considered the key factor. Participants described external and internal sources. The external sources of finance were, as mentioned above, CCGs and HEE as commissioners of health services and training. The external financial resources for training staff to achieve ACP level was also mentioned. Nevertheless, these resources were not necessarily sustained,

as we report below. The internal source of finance was through agreed business plans for service development/improvement which included budget for ACP posts.

Two of the enabling sources of finance (the external commissioning of services with funded ACP posts and the internal developments with budget for ACP posts) were described as linked to the second enabling factor – evidence of value in addressing a specific service problem or service delivery:

We've been very pleased with how the ACP roles have really helped address junior doctor shortages and other issues in [name of service] and so are now taking that learning to [name of another service] and looking to see where else we can have ACPs. (ID 211)

Several participants reported examples of ACP posts, originally with time-limited funding that had demonstrated success and were then contracted for a longer period or embedded in the service staffing budget:

We recruited some extra ACPs to take forward a pilot that we ran for one particular neighbourhood...and given the successes that we found from running that pilot our CCG colleagues commissioned the service for the rest of the neighbourhoods. (ID 121)

None of the participants were able to provide internal or published evaluation reports of ACP posts in their services, although a small number described internal evaluations as having been carried out.

The third enabling factor was structural support within the organization. Participants described several different elements within this factor. One was the facilitative influence of organizational recognition of the value of ACP roles in the service. For example, the

organizations' workforce strategy specifically included the employment of ACPs.

Participants also pointed to the positive influence that having director-level advocacy or interest in the ACP role had within the organization. A further organizational support mechanism, identified by a few participants, was having a senior staff member with a remit to support the development of ACP roles and share good practice across the organization:

Senior executive engagement and support with the chief nurse, chief operating officer and chief medical officer has significantly helped push the culture through the organization. (ID 003)

Factors perceived to inhibit the development, maintenance, and growth of ACP posts.

Participants reported their organizations were addressing many workforce problems with multiple innovations, such as the introduction of nursing associates and new apprenticeship routes to qualification. The development of ACP level posts was seen to compete in a crowded workforce agenda with more pressing priorities. Some participants suggested that managers were focused on the immediate and short term and did not look to long term workforce planning. Within this context three factors were identified as inhibiting this type of post: lack of knowledge and confusion about ACP roles, the availability of finance for ACP posts and training, and resistance to ACP posts.

The three factors were interlinked and differently ordered by participants. As one interviewee said:

At the moment finance for any developments is a big issue but then there is a huge level of confusion as to what ACP means amongst managers and staff. (ID 221)

Many participants argued that lack of knowledge about the ACP level of practice was an inhibiting factor, compounded by confusion as to whether it included or excluded groups

such as allied health consultants, clinical nurse specialists and those with independent prescribing qualifications: 'I hadn't realized it applies to any professional' (ID 052).

Some participants argued that evidence of the effectiveness of ACPs was not readily available or, if it was available, it was not seen as applicable to their service(s). This confusion combined with an absence of evidence was considered to contribute to the absence of ACPs from the workforce planning strategies in most of the organizations and their sub-units.

Lack of finance for ACP posts was a reported inhibiting factor. Many participants commented that ACPs were absent in their organization's workforce planning, with a consequent absence of internal business cases and funding for ACP positions. Another reported inhibiting factor was the siloed nature of staff establishments and budgets by professional groups, resulting in a resistance to move finance from one type of position to another e.g. a long term vacant medical post converted into finance for an ACP post:

In terms of permanent posts, where does the money come from? If you speak to each division directorate, they'll have a pot of money for the medical staff, a pot of nursing money...so where does the money come for ACPs? Usually, it comes out of the medical staffing budgets, but, of course, people are protective over their budgets and the moment you start saying to people, 'Okay, we're going to lose two doctor posts to create these ACP posts,' you can understand why that causes some challenges. (ID 171)

The absence of an organization's plan for permanent ACP posts was reported to result in the failure to retain qualifying ACPs, people the organization had supported as trainees with external training monies:

We [the NHS organization] supported this cohort of three trainee [name of profession] ACP posts with funding from HEE and at the end there were no posts for them and they have all got jobs in other trusts and PCNs [primary care networks]. (ID 151)

Some participants described situations where there was finance for ACP posts but it was insufficient to fund the supervision and support required from medical staff and others, particularly while the ACPs were in training and in their first year. This, in turn, was reported to impact on the success or otherwise of the ACP post and the retention of the individuals.

Some participants reported outright resistance to ACP posts from some doctors and nurses:

So about having advanced clinical practice in the [named specialty], we have two sites, and the views of the consultant body on one site is completely opposite to the other. So, one group very, very supportive, 'Yes, let's have [ACPs]'. Where the other is like, 'Oh God, no we don't want any of these.' (ID 281)

Other participants said there was more of a sense of nervousness, rather than resistance, about the concept, particularly from senior consultants (the most senior doctors in an NHS organization). The lack of evidence, for example, on safety and effectiveness, as well as making changes to medical practice, was reported as a source of this nervousness:

Given that we've converted some medical posts into ACP vacancies so that we can recruit, there's a nervousness around changing that medical model; so around accepting that what was traditionally carried out by medics at quite a junior grade can now be carried out by ACPs. (ID 261)

There was also a reported reluctance of the senior medical staff to convert any medical posts, and the funding for them, to ACP posts. This was because such a change was perceived as

likely to be irreversible, irrespective as to whether the ACP posts proved effective or whether the availability of doctors to employ altered.

Some participants also pointed to confusion and unanswered questions over governance and quality issues associated with ACP education, training, and credentialing as inhibiting factors to further developments:

There needs to be some oversight. Some, I suppose, localized or regional commitment to agreeing to take staff that move elsewhere...I don't think that it been banged out really about the supervision and sign-offs. (ID 191)

Finally, some participants argued that many professionals were reluctant to consider ACP work due to a lack of clarity about education routes, career progression, fear of the types of additional responsibilities, and for some whether the salary reflected the responsibility:

Amongst the [AHP profession named] there is real hesitancy and in some cases fear of the type of ACP roles taking on some of the work of the junior doctors [Doctors in postgraduate training, known as 'residents' in the United States]. They view it as just too big a leap. They have questions like: 'Are they protected, supported, if something goes wrong?', 'Will their pay reflect the responsibility?' (ID 171)

Discussion

This study examined at the organization level (the meso level of the health care system) the stimuli and the factors influencing the success or otherwise of a workforce innovation - ACP roles. To our knowledge, outside of the primary health care sector, there are few studies that have focused on this level of the system or across multiple organizations. Further, where such studies do exist, the reporting conflates the meso and micro levels.^{16,17,18} This paper also adds

new knowledge in that it addresses the introduction of ACPs from across professional backgrounds, rather than a single profession.

This qualitative study reports relatively few ACP posts in the NHS, against a national policy promoting such roles and supported by training funds. Where they existed, the ACP posts were clustered in services such emergency care, critical care, musculoskeletal services and podiatric surgery. These are services in which advanced roles were first supported by NHS national policy in the early 2000s. This finding suggests there has been very limited adoption of this workforce innovation.²⁴ We consider our findings through the lens of the two framing theories^{24,25} to identify potential explanations.

Greenhalgh et al.'s theory and model propose that there must be system readiness for change for innovations to be successful. This system readiness comprises three elements. The first being that the current situation is judged intolerable, the second that there are resources for innovation and the third that there are supportive individuals in positions of decision-making power.²⁴ In our study we identified four stimuli that seemed to have driven the development of ACP roles. Two of these were challenges pushing organizations to consider the introduction of ACP posts: (1) workforce shortages, particularly of doctors for which ACPs became a substitute, and (2) failure to retain experienced staff, particularly nurses for which ACP roles provided a career route. The first stimulus has been reported widely at national level in other countries.^{8,28} The second stimulus has not been described before to our knowledge. The other two stimuli were opportunities which pulled organizations to create new ACP or trainee ACP posts: (3) a new income stream specifically for ACP services, and (4) new external finance for training posts. These types of pull stimuli have been reported in other countries, for example, in the US when the nurse practitioner services could be billed under the Affordable Care Act.²⁸

Greenhalgh et al.'s model also proposed that for successful introduction the innovation must be seen to have relative advantage by those adopting it, it must be understood by all parties, and be compatible with current ways of working.²⁴ Further, the model suggests that implementation and routinization of innovation depends on top- and middle-management support, funding and timely evaluation. Our study participants reported that the creation and continuance of ACP roles was facilitated by the availability of evidence of the value (including efficiency, safety, and cost consequences) of ACPs to senior decision makers (i.e. evidence of relative advantage). This has not been reported before, although hospital managers' knowledge gaps about advanced nurse practitioners have been explored in the Canadian setting.²⁹ We found top management and senior clinician support was considered influential in the establishment and maintenance of the ACP posts that existed. Also, dedicated finance was reported to support the implementation and maintenance of ACP posts. These are factors previously reported in international reviews of advanced nurse practitioner developments.^{7,28}

We discovered that some organizations were engaging with the innovation and employed active change agency strategies, but it was evident that most organizations were not. The inhibiting factors to the creation and maintenance of ACP posts included confusion as to what this level of practice was (lack of agreed meaning), lack of readily available evidence of effectiveness and safety (absence of evidence of relative advantage), and lack of identified budget for such posts (absence of funding). Study participants also reported lack of support, and in some cases active resistance, to such posts from senior doctors. Some of these findings accord with existing evidence in relation to nurse practitioners.^{12,13,14,16,28} Further, it was reported that in some professions there was little appetite to take on ACP roles and responsibilities.

Greenhalgh et al.'s review drew on research about practices, products and technological innovation. It did not consider the innovation of new or changing roles between professional groups.²⁴ The innovation of ACPs is fundamentally a disruption to current ways of working and the work boundaries between professions. Abbott argued that, at the micro level of the team, these boundaries were always blurred or fuzzy, and it was at the organization and broader societal level that the boundaries were significant in claims for jurisdiction, clients, knowledge, resources and rewards.²⁵ It was further argued that the dominant professions were not homogenous but stratified and split by speciality, resulting in different boundary settlements being reached, dependent on whether they were sufficient in number to supply all client demand, whether they wished to divest work seen as routine or less prestigious, and on their relationship with the encroaching profession.²⁵ Our study reported resistance by senior doctors to the concept of ACPs (i.e. taking some work usually undertaken by doctors), but whether that resistance was based on the absence of evidence of relative advantage or views about the work boundaries of doctors versus other groups, or a combination of both requires further investigation. The inference was that where additional external funding became available for the posts there was less resistance to the innovation. However, when new posts required internal funding from existing staffing budgets, with the potential for permanent loss of budget for medical staffing, this innovation seemed to be resisted (actively or through passive non-cooperation) more strongly. Resistance to ACPs was reported even in the face of long-term medical staff vacancies and the problematic, costly, use of locum doctors. This resistance suggests the defence of resources for medical posts was important to some senior medical staff.

On the basis of these findings, we theorize that in the absence of new income streams for ACP level posts, the implementation and routinization of this workforce innovation will continue to be challenged, or at least passively resisted, by some of those who hold positions

of power at the meso level. This proposition requires testing over time and across a range of organizations. Likewise, in the absence of new income streams it is unclear the extent to which other professional groups in the NHS are prepared to convert their staffing budgets to create and sustain ACP level posts i.e. ceding resource to undertake the work usually undertaken by doctors. The evidence in this study suggests that for some, but not all, professional leaders in control of staff budgets this might be a strategy to advance career opportunities, retain experienced staff and advance the boundaries of work of their profession.

A broader question remains as to whether there is likely to be widespread assimilation of ACP roles in countries like England to address the quadruple challenges facing health systems. The pandemic created intolerable challenges to health care staffing across the globe, precipitating significant shifts in work roles between the professions but only at crisis points. In the context of Greenhalgh et al.'s model, our findings suggest that the chances of the diffusion and adoption of the ACP role will be increased by paying attention to the provision of evidence of value within organizations (relative advantage, knowledge transfer and strategic change agency).²⁴ However, Greenhalgh et al. acknowledged the paucity of studies that considered differential power held by different groups when deciding whether to introduce and sustain innovations in complex organizations,²⁴ a point echoed in a recent evidence review.³⁰ Using the lens of Abbott's theory of system of professions,²⁵ our study findings suggest that the introduction and routinization of ACP-level posts will only progress in a few settings and in a limited way. This is because, in the absence of new income streams, the movement of financial resource from a dominant professional group to other groups is likely to be contested as a boundary encroachment, only conceded in the face of intolerable situations and workforce shortages. The ceding of work roles to ACPs in this scenario is likely to need research and business evidence of value specific to that service, strategic

change agency, and most importantly powerful supporters within the organization. This requires investigation over time and in different contexts - for example, in organizations with few or declining numbers of postgraduate doctors in training.

Limitations

There are two main limitations to our study. First, our qualitative study is limited by its focus on one metropolitan area; however, we have tried to mitigate this by a purposive sampling frame which sought breadth across types of NHS organizations and senior voices within that.

Second, some of the study researchers have professional backgrounds in nursing, which may have influenced their interpretation of the results. However, this was mitigated in that, as a team, we brought different perspectives, including as social scientists and former NHS managers. A strength of this study was that it was framed theoretically, and this was used in the analysis and to propose further theories requiring testing and investigation.

Conclusions

The main stimulus at the organizational level for advanced clinical practice posts was workforce shortages, particularly of doctors in training. National policy suggests ACP-level posts are one solution and we pose the question in our title: are they a remedy for workforce problems? The theoretical framing of our analysis suggests these posts could be a solution but also a challenge. While the national policy agenda is to promote ACP roles, we found limited understanding, limited evidence, nervousness and open resistance at the meso level of the health system. It was evident that development scenarios, which introduce new monies for such roles, will reduce some of the inhibiting factors. However, where the introduction of

ACP roles requires funding to move from one part of a service to another, and from one professional group to another, the growth of these roles is likely to be contested. In such scenarios, research and business evidence of relative advantage will be important, as will supporters in powerful positions. The paucity of publicly available evidence on the cost effectiveness and safety of ACP roles across the range of professions and services, as advocated in the national policy in England, requires urgent attention.

References

1. Bodenheimer T, Sinsky C. From triple to quadruple aim: care of the patient requires care of the provider. *Ann Fam Med*. 2014; 12:573-6.
2. World Health Organization. Global strategy on human resources for health: workforce 2030. www.who.int/health-topics/health-workforce#tab=tab_1 (2016, accessed 30-10-2020)
3. Mullan F, Frehywot S. Non-physician clinicians in 47 sub-Saharan African countries. *Lancet*. 2007; 370: 2158-2163.
4. Pulcini J, Jelic M, Gul R et al. An international survey on advanced practice nursing education, practice, and regulation. *Journal of Nursing Scholarship* 2010;42:31–9.
5. Heale, R. and Rieck Buckley C. An international perspective of advanced practice nursing regulation. *International Nursing Review* 2015; 62:421-429.
6. Organisation for Economic Co-operation and Development. Health Workforce Policies in OECD Countries. dx.doi.org/10.1787/9789264239517-en. <http://www.oecd.org/health/health-systems/health-workforce-policies-in-oecd-countries-9789264239517-en.htm> (2016, accessed 30-10-2020)
7. International Council of Nurses. Guidelines for Advanced Practice Nursing. www.icn.ch/system/files/documents/2020-04/ICN_APN%20Report_EN_WEB.pdf (2020, accessed 30-10-2020).

8. Eyal N, Cancedda C, Kyamanywa P et al. Non-physician Clinicians in Sub-Saharan Africa and the Evolving Role of Physicians. *Int J Health Policy Manag.* 2015; 5:149-53.
9. Saxon RL, Gray MA, Oprescu FI. Extended roles for allied health professionals: an updated systematic review of the evidence. *J Multidiscip Healthc* 2014; 7:479–88.
10. Cawley JF, Hooker RS. Determinants of the physician assistant/associate concept in global health systems. *Int J Healthcare.* 2018; 4:50-60.
11. Drennan VM, Ross F. Global nurse shortages-the facts, the impact and action for change. *Br Med Bull.* 2019; 130:25-37.
12. Maier CB. The role of governance in implementing task-shifting from physicians to nurses in advanced roles in Europe, U.S., Canada, New Zealand and Australia. *Health Policy.* 2015; 119:1627-35.
13. Andregård AC, Jangland E. The tortuous journey of introducing the nurse practitioner as a new member of the healthcare team: a meta-synthesis. *Scand J Caring Sci.* 2015; 29:3-14.
14. Chulach T, Gagnon M. Working in a ‘third space’: a closer look at the hybridity, identity and agency of nurse practitioners. *Nursing Inquiry* 2016; 23:52-63.
15. Torrens C, Campbell P, Hoskins G et al. Barriers and facilitators to the implementation of the advanced nurse practitioner role in primary care settings: A scoping review. *Int J Nurs Stud.* 2020; 104:103443.
16. Kilpatrick K, Harbman P, Carter, N et al. The acute care nurse practitioner role in Canada. *Nursing Leadership* 2010; 23:114-139.
17. Goemaes R, Shawe J, Beeckman D et al. Factors influencing the implementation of advanced midwife practitioners in healthcare settings: A qualitative study. *Midwifery* 2018; 66:88-96.
18. Schober, M.M, Gerrish, K. and McDonnell, A., Development of a conceptual policy framework for advanced practice nursing: an ethnographic study. *Journal of Advanced Nursing*, 2016; 72:1313-1324.
19. National Health Service England. The NHS Five Year forward View. <https://www.england.nhs.uk/publication/nhs-five-year-forward-view/> (2014, accessed 20-10-2020)
20. National Health Service England. The Long Term Plan. 2019 <https://www.longtermplan.nhs.uk/> (2019 accessed 20-10-2020)
21. Health Education England. Investing in people for health and health care. NHS Health Education England: London; UK. 2014

22. Health Education England. Multi-professional framework for advanced clinical practice in England. <https://www.hee.nhs.uk/our-work/advanced-clinical-practice/multi-professional-framework> (2018, accessed 30-10-2020)
23. Horsfield C. National Critical Care Nursing Workforce Survey: Overview Report of the Critical Care Networks – National Nurse Leads. www.cc3n.org.uk/uploads/9/8/4/2/98425184/national_critical_care_nursing_workforce_survey_report_july_2020_final_v.pdf, (2020, accessed 30-10-2020)
24. Greenhalgh T, Robert G, Macfarlane F et al. Diffusion of innovations in service organizations: systematic review and recommendations. *The Milbank Quarterly* 2004; 82:581-629.
25. Abbott A. *The System of Professions – a Study of the Division of Expert Labour*. London: University of Chicago Press, 1988
26. Crotty, M. *The foundations of social research: meaning and perspective in the research process*. Thousand Oaks, CA: Sage, 1998
27. Boyatzis, R.E., *Transforming qualitative information: Thematic analysis and code development*. Thousand Oaks, CA: Sage, 1998.
28. Maier C, Aiken L and Busse R. Nurses in advanced roles in primary care: Policy levers for implementation, OECD Health Working Papers, No. 98, OECD Publishing, Paris. <http://dx.doi.org/10.1787/a8756593-en> (2017, accessed 30-10-2020)
29. Carter N, Dobbins M, Ireland, S et al. Knowledge gaps regarding APN roles: What hospital decision-makers tell us. *Nursing Leadership* 2013; 26:60-75.
30. Clarke JM, Waring J, Bishop S, et al. The contribution of political skill to the implementation of health services change: a systematic review and narrative synthesis. *BMC Health Services Research*. 2021; 21:1-5.